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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/604,883	08/25/2003	Chien-Shen Wung	10766-US-PA	1882

31561 7590 03/17/2006

JIANQ CHYUN INTELLECTUAL PROPERTY OFFICE
7 FLOOR-1, NO. 100
ROOSEVELT ROAD, SECTION 2
TAIPEI, 100
TAIWAN

EXAMINER

TUROC, DAVID P

ART UNIT PAPER NUMBER

1762

DATE MAILED: 03/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/604,883

Applicant(s)

WUNG ET AL.

Examiner

David Turocy

Art Unit

1762

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,3-8,12,14,15 and 18-19 is/are allowed.
- 6) ☐ Claim(s) 2,9-11,13,16,17 and 20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____
- Paper No(s)/Mail Date ____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

2. Claims 2, 9, 13, 16, 17, and 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 2 and 13: The claims include a reference to an angle of oblique evaporation in a range of about 10 degrees to 30 degrees. These claims are indefinite because it is unclear from what reference the angles are measured. Are the angles measured relative the horizontal or perpendicular? In addition, if claims are amended, support for such added reference should be present in the case as originally filed.

Claims 9 and 20: The claims include a reference to the size of each of the silicon seed is in the range of about 0.5 microns to 1 micron. These claims are indefinite because it is unclear what is the dimension that includes the measurement. Are they 0.5 microns to 1 micron thick, do the seeds have a diameter of 0.5 microns to 1 micron, etc.? In addition, if claims are amended, support for such added dimension should be present in the case as originally filed.

Claims 16 and 17: These claims are indefinite because they depend from claim 12, but should more appropriately depend from claim 15. Therefore, for the purposes of applying art the examiner is interpreting the claims to depend from 15.

Appropriate correction required.

Allowable Subject Matter

- 3. Claims 1, 3-8,10-12,14-15,18, and 19 are allowed.
- 4. Claims 2, 9, 13, 16, 17, and 20 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.
- 5. The following is a statement of reasons for the indication of allowable subject matter: None of the prior art cited or reviewed by the examiner, alone or in combination, discloses the method of controlling the seed position by forming the layers as claimed, specifically oblique evaporating the second metal layer onto a first metal layer, wherein each of the first and second metal layers include a plurality of continuous openings to the substrate, with subsequent removal of the first and second metal layers.

The closest prior art for silicon seeds, US Patent 5447117, discloses accurately controlling the plurality of seeds on the substrate, but fails to suggest a masking method as claims.

The closest prior art for masking, US Patent 4256816 by Dunkleberger and US Patent 4448797 by Burnham disclose masking using a similar masking structure and subsequent removal of structure, but fails to suggest oblique evaporation and/or control of crystal seed deposition.

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Turocy whose telephone number is (571) 272-2940. The examiner can normally be reached on Monday-Friday 8:30-6:00, No 2nd Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

David Turocy
AU 1762

A handwritten signature in black ink, appearing to be 'T. Meeks', with a large, sweeping initial 'T' and a checkmark-like flourish.

**TIMOTHY MEKS
SUPERVISORY PATENT EXAMINER**